

Applicant : Stefan J. Burmeister
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Attorney's Docket No.: 12754-143001 / 2001 P7507 US 01

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) Apparatus for coupling optical power into a fiber and separately monitoring optical power, comprising:
 - (a) a Vertical Cavity Surface Emitting Laser ("VCSEL") array including a first VCSEL providing light directed into the fiber and having a first optical power output and a second VCSEL coupled in parallel therewith, the second VCSEL having a second optical power output that is proportional to but substantially different from the first optical power output of the first VCSEL; and
 - (b) means for monitoring the second optical power output of said second VCSEL to provide an indication of the first optical power output.
2. (Original) Apparatus as set forth in claim 1 wherein said VCSEL array and said means for monitoring are both mounted in a TO can.
3. (Original) Apparatus as set forth in claim 2 wherein said TO can includes an optical window through which light output by said first VCSEL may pass.
4. (Cancelled)
5. (Original) Apparatus as set forth in claim 2 wherein said TO can further includes a plurality of electrical connection pins.

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6. (Original) Apparatus as set forth in claim 5 wherein said first VCSEL is coupled to the same electrical pins as said second VCSEL.

7. (Cancelled)

8. (Original) Apparatus as set forth in claim 1 wherein said first VCSEL and said second VCSEL are both driven by the same power source.

9. (Original) Apparatus as set forth in claim 1 wherein said monitoring means is a monitoring diode.

10. (Previously Presented) Apparatus as set forth in claim 9 wherein current of said monitoring diode is proportional to light emitted by said second VCSEL.

11. (Original) Apparatus as set forth in claim 1 wherein said first VCSEL generates an optical data stream.

12. - 17. Cancelled

18. (Currently Amended) A Vertical Cavity Surface Emitting Laser ("VCSEL") component for driving a fiber optic, comprising:

- (a) a can having an optical window for coupling optical power into said fiber optic;
- (b) a first VCSEL mounted in said can, the first VCSEL providing light directed toward said optical window and having a first optical power output;
- (c) a monitoring diode mounted in said can; and

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(d) a second VCSEL mounted in said can, the second VCSEL providing light directed toward said monitoring diode and having a second optical power output that is proportional to but substantially different from the first optical power output.

19. (Previously Presented) A VCSEL component according to claim 18 wherein said first VCSEL and said second VCSEL are electrically coupled in parallel.

20. (Original) A VCSEL component according to claim 19 wherein said can has a plurality of electrical connection pins and said first VCSEL is coupled to the same pins as said second VCSEL.

21. (Cancelled)

22. (Currently Amended) A method for fabricating a device capable of coupling optical power into a fiber and separately monitoring optical power, comprising steps of:

(a) forming a Vertical Cavity Surface Emitting Laser ("VCSEL") array by coupling in parallel a first VCSEL and a second VCSEL connected to the same power source, the first VCSEL having a first optical power output and the second VCSEL having a second optical power output that is proportional to but substantially different from the first optical power output; and

(b) mounting said VCSEL array and means for monitoring optical power output by said second VCSEL in a TO can.

23. (Previously Presented) A method as set forth in claim 22 further comprising the step of forming an optical window in said TO can through which light output by said first VCSEL may pass.

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24. (Previously Presented) A method as set forth in claim 22 further comprising the step of attaching a fiber to said first VCSEL.

25. (Previously Presented) A method as set forth in claim 22 further comprising the step of coupling said first VCSEL and said second VCSEL to the same electrical pins in said TO can.

26. (Cancelled)

27. (Currently Amended) A method for coupling optical power into a fiber and separately monitoring optical power, comprising the steps of:

(a) coupling in parallel a first Vertical Cavity Surface Emitting Laser ("VCSEL") and a second VCSEL connected to the same power source, the first VCSEL having a first optical power output and the second VCSEL having a second optical power output that is proportional to but substantially different from the first optical power output;

(b) generating, via said first VCSEL, an optical data stream; and

(c) monitoring the second optical power output of said second VCSEL to provide an indication of the first optical power output of said first VCSEL coupled in parallel therewith.

28. (Previously Presented) A method as set forth in claim 27 further comprising the step of mounting the VCSEL array formed by coupling said first VCSEL and said second VCSEL, together with means for monitoring the optical power output of said second VCSEL, in a TO can.

29. (Currently Amended) A method for coupling optical power into a fiber and separately monitoring optical power, comprising the steps of:

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(a) outputting an optical data stream utilizing a first Vertical Cavity Surface Emitting Laser ("VCSEL") having a first optical power output; and

(b) monitoring the first optical power output of said first VCSEL by separately monitoring a second optical power output of a second VCSEL coupled in parallel therewith, the second optical power output being proportional to but substantially different from the first optical power output.

30. (Previously Presented) Apparatus as set forth in claim 1, wherein the second optical power output is a percentage of the first optical power output.

31. (Previously Presented) Apparatus as set forth in claim 1, wherein the second optical power output is a multiple of the first optical power output.

32. (Previously Presented) A VCSEL component according to claim 18, wherein the second optical power output is a percentage of the first optical power output.

33. (Previously Presented) A VCSEL component according to claim 18, wherein the second optical power output is a multiple of the first optical power output.

34. (New) Apparatus as set forth in claim 30, wherein the second optical power output is about fifty percent or about seventy five percent of the first optical power output.

35. (New) Apparatus as set forth in claim 32, wherein the second optical power output is about fifty percent or about seventy five percent of the first optical power output.